Abstract

Title: How to utilise Carbon Dioxide to enable Electrification of Fuels and Chemicals

Roughly 75% of the world’s fossil fuel use can with relatively ease be replaced by electricity. The remaining approximately 25% mainly used for heavy transport, high intensity industry and as chemical feedstock is not easily replaced by electricity. This part of the fossil fuel use carries the largest potential for synthetic fuels and crude which will be produced by utilising both biomass and liquid fuels produced by electricity. Here Carbon Dioxide is an important molecule in regards to the potential it has as an energy carrier. This talk will focus on how to utilise electricity combined with Carbon Dioxide to produce synthetic fuels; both today’s fuels (Methane, Gasoline & Diesel/Jet) but also potential fuels of tomorrow (Methanol, Ammonia, DME etc). For chemicals Topsoe has commercialised a high temperature CO2 electrolysis technology and the potential for this technology both within fuels and chemical production will be discussed.

Topsoe is a catalyst and technology company supplying catalyst and technology for the production of fuels and chemicals. Topsoe also supplies CO2 electrolysis on commercial terms based on high temperature solid oxide electrolysis.